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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PRASAD R. VISHNUBHOTLA

Appeal 2009-008510
Application 11/175,061¹
Technology Center 2100

Before JOSEPH L. DIXON, HOWARD B. BLANKENSHIP, and JAY P.
LUCAS, *Administrative Patent Judges.*

LUCAS, *Administrative Patent Judge.*

DECISION ON APPEAL²

¹ Application filed July 5, 2005. The real party in interest is International Business Machines Corp.

² The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Appellant appeals from a final rejection of claims 1 to 20 under authority of 35 U.S.C. § 134(a). The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

We affirm. In addition, we apply a new ground of rejection under 35 U.S.C. § 101 to claims 1 to 7 and 15 to 20.

Appellant's invention relates to a method of integrating file system events into a database management system (DBMS) (claim 1). In the words of Appellant:

The claimed subject matter employs file system callback mechanisms associated with asynchronous and non-blocking input/output (I/O) functions to communicate the completion of file creation, deletion and update operations to a RDBMS. The callbacks are then employed to fire database triggers.

(Spec. 3, ¶ [0010]).

The following claims illustrate the claims on appeal:

Claims 1, 8, and 15:

1. A method for integrating file system events into a database management system (DBMS), comprising:

designating a file of interest;

detecting a file state change event associated with the file of interest;

updating a file events table of a database upon a detection of the file state change event;

generating a database trigger upon a change in the file events table; and

updating the database with data from the file of interest upon receipt of the database trigger.

8. A system for integrating file system events into a database management system (DBMS), comprising:

a database;

a file events table associated with the database;

a file of interest;

logic for detecting a file state change event associated with the file of interest;

logic for updating the file events table upon a detection of the file state change event;

a database trigger generated upon a change in the file events table; and

logic for updating the database with data from the file of interest upon receipt of the database trigger.

15. A computer programming product for integrating file system events into a database management system (DBMS), comprising:

a memory;

logic, stored on the memory, for designating a file of interest;

logic, stored on the memory, for detecting a file state change event associated with the file of interest;

logic, stored on the memory, for updating a file events table of a database upon a detection of a file state change event;

logic, stored on the memory, for generating a database trigger upon a change in the file events table; and

logic, stored on the memory, for updating the database with data from the file of interest upon receipt of the database trigger.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Burns

US 6,088,694

Jul. 11, 2000

REJECTIONS

The Examiner rejects the claims as follows:

R1: Claims 1 to 20 stand rejected under 35 U.S.C. § 102(b) for being anticipated by Burns.

R2: Claims 8 to 14 stand rejected under 35 U.S.C. § 101 for being non-statutory subject matter.

We have only considered those arguments that Appellant actually raised in the Briefs. Arguments Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUES

The issues involve whether Appellant has shown that the Examiner erred in rejecting the claims under 35 U.S.C. §§ 102(b) and 101. The anticipation issue specifically turns on whether Burns teaches Appellant's claim limitations "generating a database trigger upon a change in the field events table" and "updating the database with data from the file of interest upon receipt of the database trigger," as recited in claim 1. The 35 U.S.C. § 101 issue turns on whether exemplary claim 1 qualifies as statutory subject matter under the *Bilski v. Kappos* and *Parker v. Flook* decisions, cited *infra*; on whether claim 8 qualifies as software *per se*; and whether the program product of claim 15 is disqualified by the *Nuijten* ruling, cited *infra*.

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

Disclosure

1. Appellant has invented a method, system, and program product that integrates file system events into a database management system (claims 1, 8, and 15). The claimed method includes generating a database trigger upon

a change in a file events table and updating the database with data from a file of interest upon receiving the database trigger (claim 1). File events are also known as actions (*e.g.*, a file creation, a file deletion, or a file modification) (Spec. 10, ¶ [0033]).

Burns

2. The Burns reference teaches integrating file system events into a database management system. (*See* Abstract, col. 7, ll. 12 to 17.) Burns also teaches generating a structured query logic (SQL) trigger associated with an unlinking of an old version and a linking of a new version of a file. (*See* col. 14, ll. 25 to 32.) Burns further teaches updating the metadata in a database table with data from the file upon receiving the SQL trigger. (*See* col. 8, ll. 38 to 40, 43, and 44.) Burns' file operations include updating or appending a file. (*See* col. 14, ll. 27 to 28.)

PRINCIPLE OF LAW

Appellant has the burden on appeal to the Board to demonstrate Examiner error. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

ANALYSIS

*Arguments with respect to the rejection
of claims 1 to 20 and
under 35 U.S.C. § 102(b) [R1]*

The Examiner has rejected the noted claims for being anticipated by the Burns reference, pages 3 to 11 of the Examiner's Answer.

Appellant argues that the Examiner mischaracterizes the metadata and table 60 as a “file events table.” (App. Br. 14, middle). Appellant argues that no trigger is based upon a change in either the metadata or table 60 (*i.e.*, Burns does not suggest updating a file events table because Burns does not even suggest a file events table.) (*Id.*).

We disagree with Appellant’s argument for the following reasons. Appellant has invented a method, system, and program product that integrates file system events into a database management system (FF#1). The method includes generating a database trigger upon a change in a file events table and updating the database with data from a file of interest upon receiving the database trigger (*id.*). File events are also known as actions (*e.g.*, a file creation, a file deletion, or a file modification) (*id.*).

In comparison, the Burns reference teaches integrating file system events into a database management system (FF#2). Burns also teaches a structured query logic (SQL) trigger (*i.e.*, Appellant’s claimed “database trigger”) associated with an unlinking of an old version and a linking of a new version of a file (*id.*). Burns further teaches updating the metadata in a database table (*i.e.*, cited as Appellants’ claimed “file events table”) with data from the file when the SQL trigger is received (*id.*). Burns’ file operations (*i.e.*, the claimed “file events”) include updating or appending a file (*id.*).

We find that Burns’ teachings of unlinking of an old version and linking of a new version of a file are no different from Appellant’s claimed “updating the database with data from a file of interest” (claim 1). Further, we find that the claimed “generating” step of claim 1 reads on Burns’

teaching for the SQL triggering the unlinking and linking of a file in a file events table.

For the above stated reasons, Appellant has failed to demonstrate error in the Examiner's rejection. Accordingly, we affirm.

*Argument with respect to the rejection
of claims 8 to 14 and
under 35 U.S.C. § 101 [R2]*

In the Answer, the Examiner rejected the noted claims for being directed to non-statutory subject matter under 35 U.S.C. § 101, pages 11 to 12.

Appellant argues: "To store [a 'database,' a 'file events table,' or a 'file of interest,'] physical modifications must be made to the physical memory or, otherwise, nothing would be stored. In other words, a physical system is inherently part of the claimed subject matter and, therefore, ... [is] statutory." (Rep. Br. 14, middle).

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. (*See In re Warmerdam*, 33 F.3d 1354, 1361 (Fed. Cir. 1994)).

In accordance with the teachings of *Warmerdam*, cited above, we find that the system of claim 8 is software *per se*. That is, the elements of claim 1 are not embodied in any tangible computer-readable medium. We thus find that the system of claim 8 is non-statutory subject matter. Accordingly, we affirm.

Claims 9 to 14 fall with claim 8.

REJECTION OF CLAIMS 1 TO 7 AND 15 TO 20 UNDER
37 C.F.R. § 41.50(b) [R3]

We make the following new ground of rejection using our authority under 37 C.F.R. § 41.50(b).

Rejection:

Claims 1 to 7 and 15 to 20 are rejected under 35 U.S.C. § 101, as being directed to non-statutory subject matter.

“[The Supreme] Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible ‘process.’” *See Bilski v. Kappos*, 130 S.Ct. 3218, 3227 (2010).

Since exemplary claim 1 merely recites, in relevant part, “a file of interest,” “a file state change event,” “a file events table,” and “a database trigger,” we find that the claim fails to recite a machine or transformation of an article of manufacture. None of the above-stated claim elements qualify as a machine. Nor does the claim limitation “updating the database with data from the file of interest upon receipt of the database trigger” qualify as a transformation of an article of manufacture in accordance with the transformation prong of the machine-or-transformation test. Rather, these are merely abstract ideas that comport with the teachings of *Bilski*, 130 S.Ct. at 3229.

In *Bilski*, the Supreme Court held that there are other tools for establishing subject matter eligibility under 35 U.S.C. § 101. Those tools involve an inquiry into whether a process is merely an abstract idea. “In

searching for a limiting principle, this Court’s precedents on the unpatentability of abstract ideas provide useful tools.” (*Id.*).

According to *Bilski*, one tool for determining whether a process is an abstraction is the decision in *Parker v. Flook*, 437 U.S. 584, 590 (1978) (holding that the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity). “The Court, therefore, need not define further what constitutes a patentable ‘process,’ beyond pointing to the definition of that term provided in § 100(b) and looking to the guideposts in *Benson*, *Flook*, and *Diehr*.” *Bilski v. Kappos*, 130 S.Ct. 3218, 3231 (2010).

Regarding claim 1, we find that there is not even a machine or transformation recited in independent claim 1 that would have qualified as “insignificant extra-solution activity.” We thus find that claim 1’s recitations are not statutory subject matter in accordance with the teachings of *Bilski* and *Flook*.

Turning to the program product of independent claim 15, the claim recites, in relevant part, “a memory.”

“A transitory, propagating signal like Nuijten’s is not a ‘process, machine, manufacture, or composition of matter.’ Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter.” *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007).

We note that Appellant discloses the claimed “memory” “can be any means that ... propagates ... data.” (Spec. 6, ¶ [0020]). We find Appellant’s disclosure significant, in that only signal waves are propagated in the context of the programming product of claim 15. In accordance with

Nuijten's teaching that a signal cannot be patentable subject matter, we reject claim 15 as outside the scope of 35 U.S.C. § 101.

Claims 16 to 20 fall with claim 15.

CONCLUSIONS OF LAW

Based on the findings of facts and analysis above, we conclude that Appellant has not shown that the Examiner erred in rejecting claims 1 to 20 under rejections R1 and R2. Above, we added a new ground of rejection [R3] under 35 U.S.C. § 101 to claims 1 to 7 and 15 to 20.

DECISION

We affirm the Examiner's rejections R1 and R2 of claims 1 to 20. In addition, in the rejection [R3] we concluded that Appellant's claims 1 to 7 and 15 to 20 were directed to non-statutory subject matter.

With respect to the affirmed rejections, 37 C.F.R. § 41.52(a)(1) provides that "Appellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejections of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2009-008510
Application 11/175,061

AFFIRMED

37 C.F.R. § 41.50(b)

peb

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